Effects of 2.45 GHz microwaves on meiotic chromosomes of male CBA/CAY mice

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Abstract

Male CBA/CAY mice were exposed daily (6 days a week) for 30 minutes in an environmentally controlled waveguide to continuous 2.45 GHz microwave radiation for 2 weeks at average whole body absorbed dose rates of 0.05, 0.5, 10, and 20 mW/g. Sham exposed animals served as controls. Chain translocations were observed at diakinesis at metaphase I in micro wave exposed animals. The yield of translocations increased with exposure, and varied nonlinearly with dose rate. An increase in incidence of univalents was seen after exposure at 10 and 20 mW/g. The findings are interpreted to indicate interference with normal spermatogenesis during the exposure period.